

Seed Testing Fee Schedule

Fees Effective December 6, 2004
Updated August 18, 2008

CDFA Seed Laboratory Goals	<p>Provide accurate, timely and cost effective seed testing services.</p> <p>Serve as an independent resource of scientific expertise in seed identification, seed physiology, and seed quality assessment.</p>
Seed Testing Services	<p>Seed samples may be submitted to the California Department of Food and Agriculture (CDFA) Seed Laboratory for testing on a fee for service basis. The attached fee schedule outlines basic services and associated fees. Other customized tests, examinations or investigations are available at a rate of \$60 per hour.</p> <p>CCR Ch. 7, Sec. 4600 through 4603</p>
Where to Submit Samples	<p>Seed Laboratory CDFA Plant Pest Diagnostics Center 3294 Meadowview Road Sacramento, CA 95832-1448</p> <p>Telephone: (916) 262-1100 FAX: (916) 262-1190</p>
What Information to Submit with Sample	<p>Samples should be clearly marked with the applicant's name (company or individual), mailing address, seed kind, variety, lot number, and lot size. Other information such as country of destination, seed treatment, seed count, seed size, field number, etc. may also be included. The information provided by the applicant will appear on the report of analysis.</p> <p>Samples of pesticide treated seed should be clearly marked with the pesticide name(s) and should be sealed in plastic bags.</p> <p>Please provide the name of a contact person with contact information, such as telephone number, FAX number, and e-mail address.</p>
Test Requests	<p>Please indicate what tests are being requested (e.g., seed identification, purity analysis, germination analysis, tetrazolium viability, noxious weed seed examination, all species examination, moisture determination, clean-out, etc.)</p>
Test Procedures	<p>Please indicate what testing procedures are preferred: Federal Seed Act (FSA), Association of Official Seed Analysts (AOSA), International Seed Testing Association (ISTA), or Canada Methods and Procedures (CM&P).</p>
Test Results	<p>The laboratory report of analysis will be mailed to the applicant's address unless other instructions are provided.</p>
Billing Information	<p>All testing fees will be invoiced to the applicant's address unless other instructions are provided.</p>

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Purity and Germination Testing Using AOSA or FSA Test Procedures

(Fees Effective December 6, 2004)

Seed Kind ⁽¹⁾	Purity ^(2, 4)	Germination ^(3, 4)	Tetrazolium Viability ⁽³⁾	Seed Kind ⁽¹⁾	Purity ^(2, 4)	Germination ^(3, 4)	Tetrazolium Viability ⁽³⁾
Alfalfa	39.00	30.00	60.00	Horsebean	30.00	55.00	60.00
Asparagus	35.00	40.00	90.00	Lettuce	52.00	36.00	75.00
Barley	63.00	29.00	75.00	Melon	42.00	36.00	60.00
Bean	30.00	47.00	60.00	Mustard	57.00	36.00	75.00
Beet	56.00	51.00	100.00	Oat	75.00	31.00	90.00
Bermudagrass	90.00	40.00	90.00	Okra	49.00	31.00	75.00
Bluegrass	53.00	36.00	90.00	Onion	49.00	31.00	75.00
Broccoli	57.00	31.00	75.00	Orchardgrass	Hourly	42.00	90.00
Brome	Hourly	38.00	90.00	Parsley	60.00	40.00	90.00
Brussels sprouts	57.00	31.00	75.00	Parsnip	60.00	40.00	90.00
Burclover	58.00	31.00	60.00	Pea	30.00	36.00	60.00
Cabbage	57.00	31.00	75.00	Pepper	36.00	36.00	75.00
Carrot	61.00	40.00	90.00	Pumpkin	42.00	40.00	60.00
Cauliflower	57.00	31.00	75.00	Radish	40.00	31.00	60.00
Celery	69.00	40.00	90.00	Rice	54.00	36.00	75.00
Chard, Swiss	56.00	51.00	100.00	Ryegrass	Hourly	36.00	90.00
Chicory	60.00	36.00	75.00	Safflower	33.00	36.00	90.00
Chives	49.00	35.00	75.00	Sorghum	60.00	36.00	90.00
Clover	48.00	31.00	60.00	Spinach	37.00	31.00	75.00
Corn, field	30.00	37.00	60.00	Squash	42.00	40.00	60.00
Corn, sweet	37.00	40.00	60.00	Sudangrass	84.00	36.00	90.00
Cotton	39.00	55.00	60.00	Sunflower	33.00	54.00	90.00
Cowpea	30.00	46.00	60.00	Tomato	36.00	36.00	75.00
Cucumber	42.00	31.00	60.00	Trefoil	48.00	36.00	60.00
Dichondra	30.00	40.00	60.00	Turnip	57.00	36.00	75.00
Dill	60.00	40.00	90.00	Vetch	62.00	31.00	90.00
Eggplant	36.00	36.00	75.00	Watermelon	42.00	36.00	60.00
Endive	60.00	40.00	75.00	Wheat	65.00	29.00	75.00
Fescue	Hourly	36.00	75.00	Wheatgrass	Hourly	38.00	90.00

- (1) Fees for tests on seed kinds not listed and for seed that is unclear, field run, or excessively dirty will be based on the cost of a similar test, or on the time required to run the test at \$60.00 per hour.
- (2) Fees for purity analysis include a California noxious weed seed examination. Refer to the table on page 5 for the appropriate submitted sample weight for the seed kind to be tested. For seed kinds not listed, contact the CDFA Seed Laboratory prior to submitting a sample for testing.
- (3) Fees for a standard germination test include the evaluation of 400 seedlings. Fees for the tetrazolium viability test include the evaluation of 200 seed embryos (see page 4 for test details). Refer to the table on page 5 for the appropriate submitted sample weight for the seed kind to be tested. For seed kinds not listed, contact the CDFA Seed Laboratory prior to submitting a sample for testing.
- (4) For germination tests of mixtures of two or more kinds of seed, the fee will be the sum of the fees established for germination tests for the components of the mixture. For a purity analysis of such seed mixtures, the fee is the same as for that component of the mixture for which the highest charge would be made if analyzed separately.

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AOSA Bulk Examinations:

All tests under this category require a minimum working sample size of approximately 25,000 seed units. The weight of the submitted sample will vary depending on the species to be tested. Please refer to the table on page 5 for the appropriate submitted sample size.

California Noxious Weed Seed\$ 35.00

California noxious weed seeds and seeds of rated plant pests are reported. A California noxious weed seed examination is included in the purity analysis fee when FSA or AOSA testing procedures are requested.

All States Noxious Weed Seed\$ 35.00

Species appearing on the USDA State Noxious-Weed Seed Requirements Recognized in the Administration of the Federal Seed Act are reported. *The fee for this test is \$20.00 when a purity analysis (AOSA or FSA), or other AOSA Bulk Examination is also requested.*

Foreign Noxious Weed Seed\$ 35.00

Noxious weed seeds for a particular country are reported. The sender is requested to provide the list of species of concern. *The fee for this test is \$20.00 when a purity analysis (AOSA or FSA), or other AOSA Bulk Examination is also requested.*

All Species\$ 35.00

Seeds of all contaminating plant species are reported. This test applies to kinds other than grass species used for sod. *The fee for this test is \$20.00 when a purity analysis (AOSA or FSA), or other AOSA Bulk Examination is also requested.*

Sclerotia\$ 35.00

The percentage of sclerotia is reported. *The fee for this test is \$20.00 when a purity analysis (AOSA or FSA), or other AOSA Bulk Examination is also requested.*

Soil\$ 35.00

The percentage of sclerotia is reported. *The fee for this test is \$20.00 when a purity analysis (AOSA or FSA), or other AOSA Bulk Examination is also requested.*

Sod Quality\$ 60.00/hour

The seeds of all contaminating plant species are reported. This test applies only to grass species used for sod.

Additional Tests and Fees:

International Rules for Seed Testing (ISTA)\$ 20.00 additional

An additional \$20.00 fee is added to the AOSA purity analysis fee for samples tested by the ISTA Rules. In addition to the purity analysis an ISTA Other Seeds by Number Determination is conducted. In this test, seeds of contaminating plant species are reported based on a sample that is approximately ten times the size of the sample for purity analysis. Please refer to the table on page 5 for the appropriate submitted sample size. The fees for ISTA germination testing are the same as stated for AOSA Rules.

Canada Methods and Procedures for Testing Seed\$ 20.00 additional

An additional \$20.00 fee is added to the AOSA purity analysis fee for samples tested by the Canada Methods and Procedures for Testing Seed (CM&P). The fees for germination testing by the CM&P are the same as stated for AOSA Rules. For size of submitted sample please contact the Seed Laboratory.

Moisture Determination\$ 30.00

Seed moisture content is tested by the air oven methods of the AOSA Rules or the ISTA Rules. Results are reported as the percentage of moisture on fresh weight basis. Samples must be submitted in a sealed plastic bag or other moisture proof container. For size of submitted sample please contact the Seed Laboratory.

Ryegrass Florescence\$ 20.00

The fee for this test is added to the germination fee.

X-ray Analysis\$35.00

This test is used to determine seed fill and/or internal seed damage due to insects.

Clean-out Test See page 4 for details of the test and fees

Treated, Pelleted, Coated, or Encrusted Seed\$ 8.00

This fee is added to the testing fees for each sample for toxic substance disposal.

Seed IdentificationFree of charge

Specimens submitted for identification must be separated into individual seed kinds.

Vigor tests\$120.00

See page 4 for details of these tests.

Clean-out Test – used only on field-run or partially conditioned seed lots

What is the advantage of a clean-out test over a standard purity analysis and germination test? Results obtained from a standard purity analysis on field-run, or partially conditioned seed lots may be misleading. Standard purity testing procedures classify small, light, and immature seed as pure seed; therefore, these seeds are planted along with the fully mature seed in the germination test. As a result, although the percentage of pure seed is high, the germination percentage is usually much lower than desired.

In a clean-out test, the percentage by weight of inert matter, seeds of other species, and small, light, non-viable or weak seed normally removed during conditioning is determined on field run or partially conditioned seed lots. The test procedure will vary depending on the seed kind.

Once the light material is removed, a germination test is performed on the remaining heavy seed.

The results of the clean-out test and the germination test can be used to estimate the amount of conditioning necessary to obtain a satisfactory level of germination for marketable seed.

The fee for the clean-out test is \$60.00 plus the cost of a germination test for the kind of seed tested.

Vigor Testing – test fee \$120

All tests include a standard warm germination test done according to AOSA or ISTA rules, results of which are included in the final report. Results of the accelerated aging, saturated salt accelerated aging and cool germination tests are compared to the standard germination results done on the same seed lot prior to vigor testing.

Vigor test results can be used to compare seed lots of the same or related genotypes, seed lots of the same origin differing in production or conditioning, or the same seed lot at different points in time. Including a reference sample against which other samples can be compared results in more meaningful comparisons.

Test	Crops Tested
Accelerated aging	Beans, corn, pea, soybeans, watermelon, zucchini
Saturated salt accelerated aging	Broccoli, carrot, cucumber, melon, onion, pepper, pumpkin, tomato, wheat
Cool germination test/Vigor index	Cotton
Speed of germination	Suitable for any species provided that germination can be readily observed as soon as it occurs, but not recommended for species with multiple seed units.
Seedling growth rate-Dry weight	Any species
Seedling growth rate-Linear growth	This test is only suitable for species that produce seedlings with a single straight shoot or plumule and a main root or single root structure.

Tetrazolium Viability Testing – prices vary depending on the species, see table on page 2

The tetrazolium viability test (TZ test) is an enzyme staining test using 2,3,5-triphenyl tetrazolium chloride in a buffered aqueous solution. The stain is used to identify actively respiring tissues within the seed. In this test the staining patterns of the embryonic tissues of 200 seed are evaluated. Seed preparation and embryo evaluation is conducted according to the standardized procedures published by the Association of Official Seed Analysts and the International Seed Testing Association. This test may be used to estimate viability of a seed lot or to determine the percentage of dormant seeds when used in conjunction with a standard germination test. Note: viable seeds do not always produce normal seedlings; therefore, TZ test results may be greater than actual germination. Please refer to the table on page 5 for the appropriate submitted sample size.

Minimum submitted sample sizes.

Note: Smaller sample sizes will be accepted for testing, however a statement will be added to the report of analysis indicating an insufficient amount of seed was received for testing.

Seed Kind ⁽¹⁾	FSA or AOSA Purity Analysis & Noxious or Bulk Exam ⁽²⁾	FSA or AOSA Germ or TZ Viability Only ⁽³⁾	ISTA Purity Analysis & Other Species Determination ⁽²⁾	ISTA Germ or TZ Viability Only ⁽³⁾	Seed Kind ⁽¹⁾	FSA or AOSA Purity Analysis & Noxious or Bulk Exam ⁽²⁾	FSA or AOSA Germ or TZ Viability Only ⁽³⁾	ISTA Purity Analysis & Other Species Determination ⁽²⁾	ISTA Germ and/or TZ Viability Only ⁽³⁾
	grams	grams	grams	grams		grams	grams	grams	grams
Alfalfa	50	2	50	5	Lettuce	30	1	30	3
Asparagus	500	40	1000	100	Melon	500	25	150	70
Barley	500	35	1000	120	Oat	500	30	1000	120
Bean	500	500	1000	1000	Okra	500	55	1000	140
Beet	500	20	500	50	Onion	70	3	80	8
Bermudagrass	10	0.5	25	1	Orchardgrass	30	1.5	30	3
Bluegrass	10	0.5	25	1	Parsley	50	1.5	40	4
Broccoli	50	5	100	10	Parsnip	50	2.5	100	10
Brussels sprouts	50	5	100	10	Pea	500	350	1000	900
Burclover	*	*	*	*	Pepper	150	6	150	15
Cabbage	50	5	100	10	Pumpkin	500	200	1000	700
Carrot	30	1.5	30	3	Radish	300	15	300	30
Cauliflower	50	5	100	10	Rice	500	16	700	70
Celery	12	0.5	25	1	Ryegrass	50	3	60	6
Chard, Swiss	300	20	500	50	Safflower	500	35	900	90
Chicory	30	1	50	5	Sorghum	500	30	900	90
Chives	50	2.5	30	3	Spinach	250	10	250	25
Corn, field	500	350	1000	900	Squash	500	200	1000	700
Corn, sweet	500	350	1000	900	Sudangrass	250	12	250	25
Cotton	500	125	1000	350	Sunflower	500	50	1000	200
Cowpea	500	125	1000	400	Tomato	50	2.5	15	7
Cucumber	500	25	150	70	Trefoil	30	1.5	30	3
Dichondra	50	2.5	50	5	Turnip	50	3	70	7
Dill	30	1.25	40	4	Vetch	500	60	1000	150
Eggplant	110	5	150	15	Watermelon	500	90	1000	250
Endive	30	1	40	4	Wheat	500	40	1000	120
Horsebean	500	1000	1000	1000					

(1) For seed kinds not listed, please contact the Seed Laboratory for the appropriate submitted sample size.

(2) For samples submitted for purity analysis, noxious weed seed examination and germination or viability testing, the seed for the germination or TZ viability testing is taken from the pure seed portion of the purity analysis.

(3) Minimum submitted sample size when only a germination test or a TZ viability test is requested.